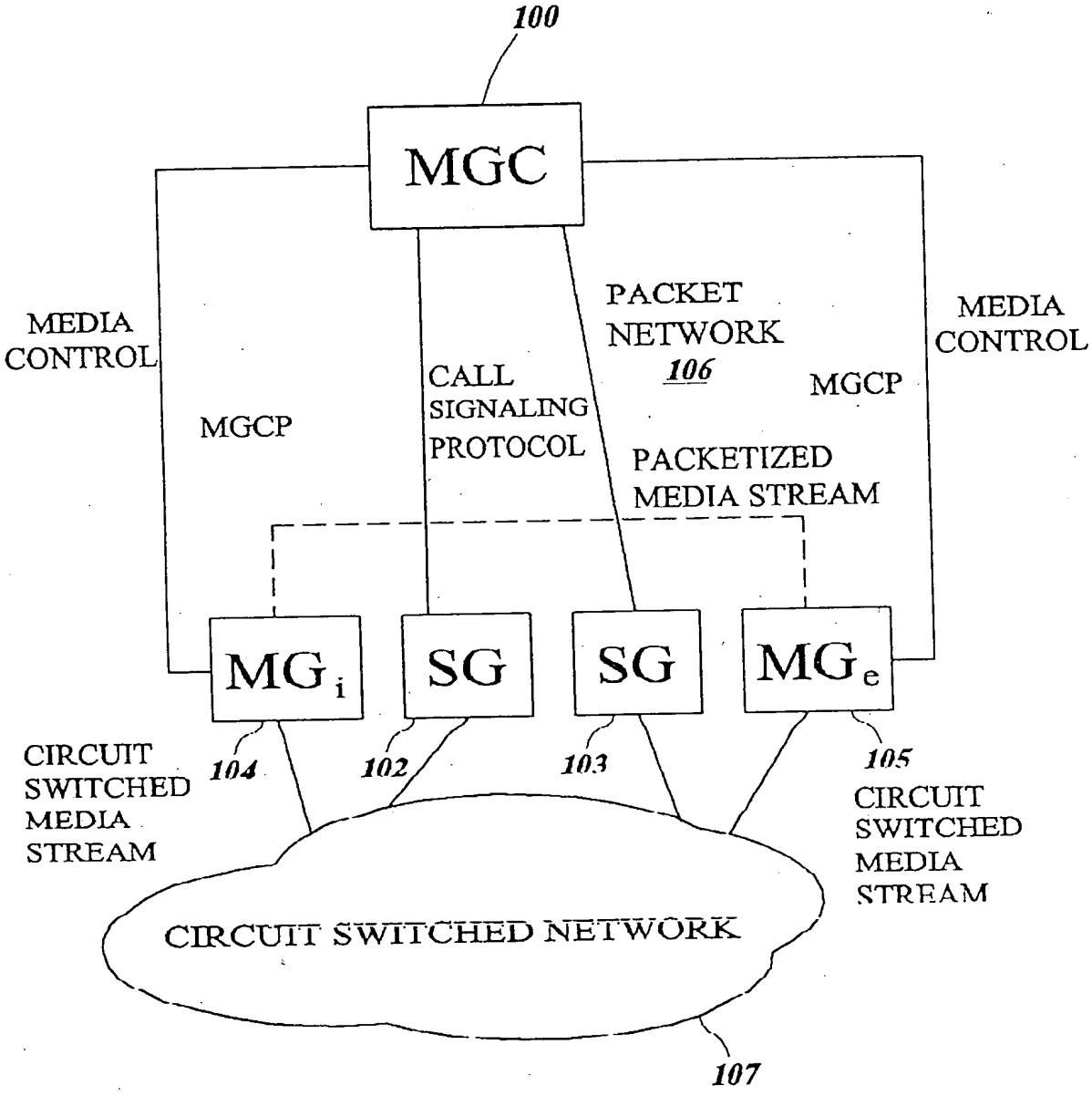


FIG. 1
(PRIOR ART)

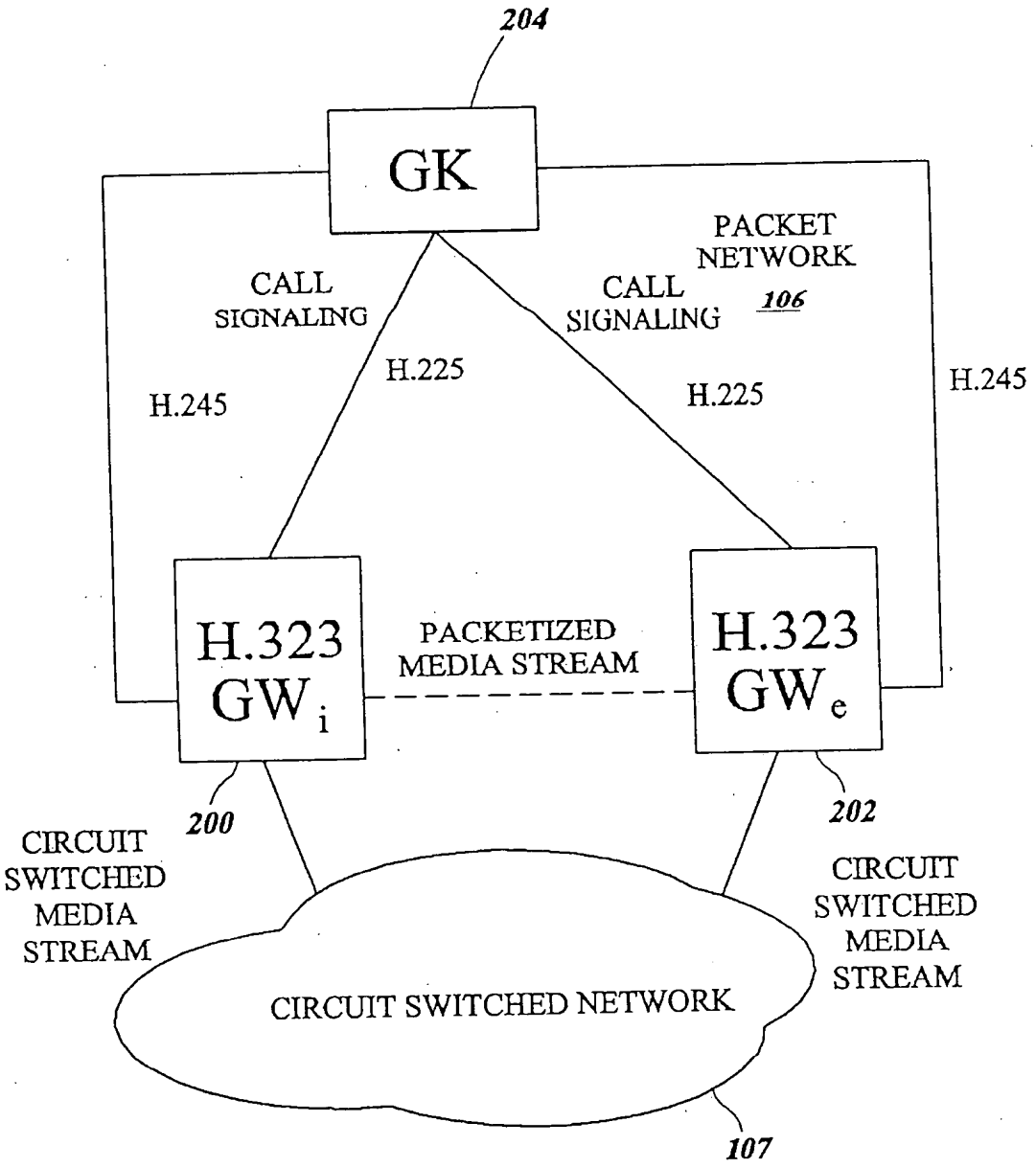


FIG. 2
(PRIOR ART)

08120 S1690560

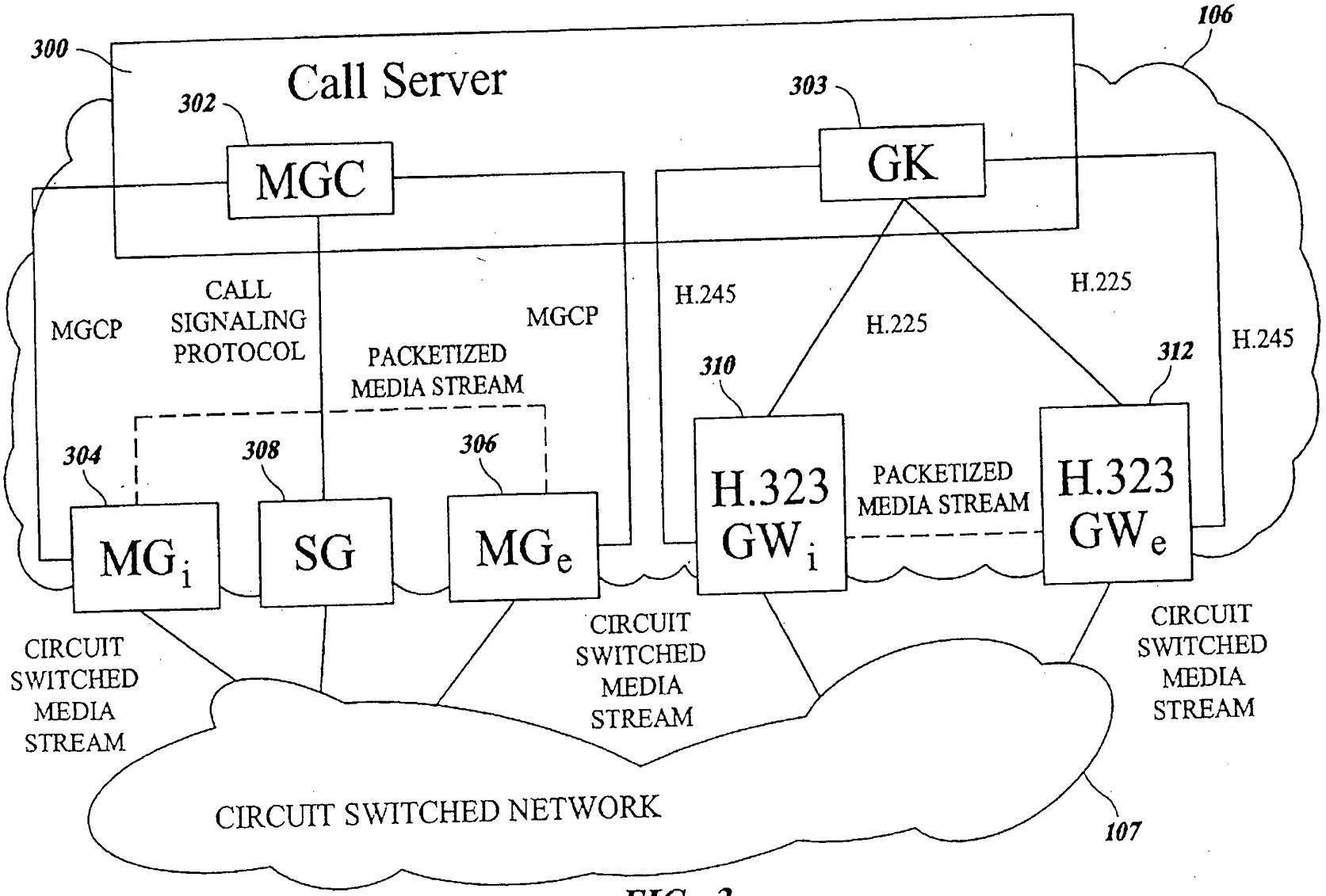


FIG. 3

08720 5869560

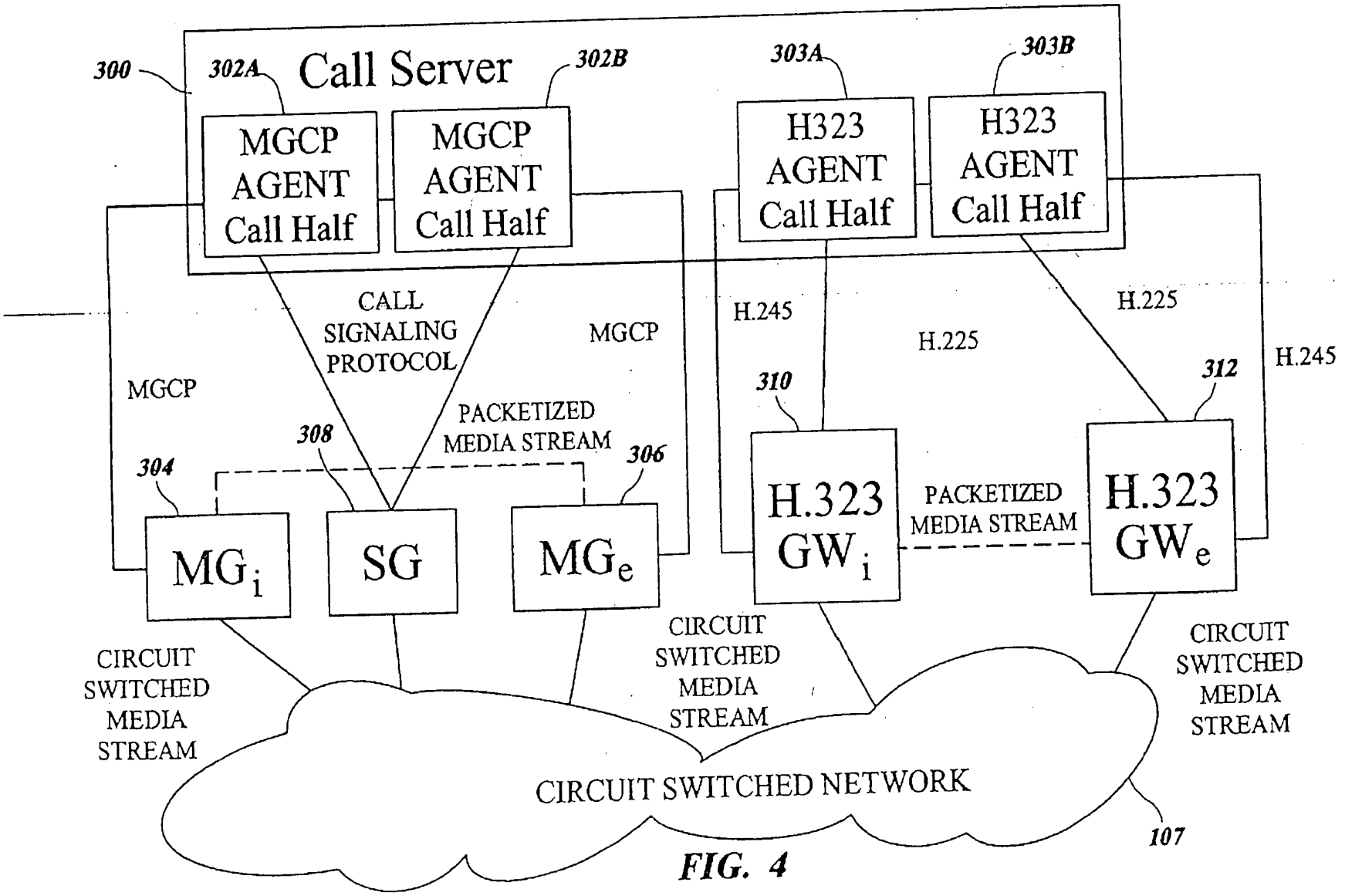


FIG. 4

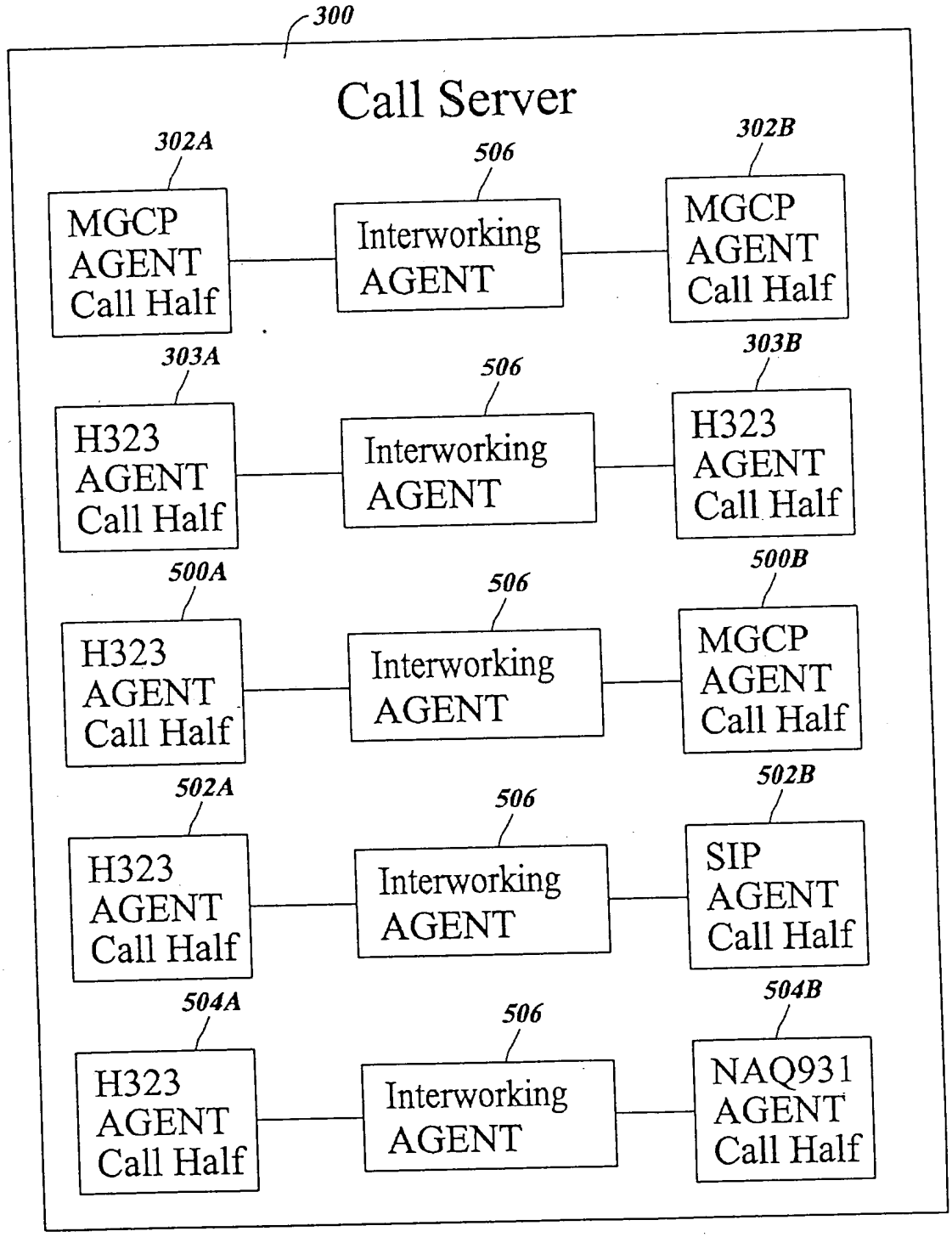

300
Call Server
302A
MGCP AGENT Call Half
506
Interworking AGENT
302B
MGCP AGENT Call Half
303A
H323 AGENT Call Half
506
Interworking AGENT
303B
H323 AGENT Call Half
500A
H323 AGENT Call Half
506
Interworking AGENT
500B
MGCP AGENT Call Half
502A
H323 AGENT Call Half
506
Interworking AGENT
502B
SIP AGENT Call Half
504A
H323 AGENT Call Half
506
Interworking AGENT
504B
NAQ931 AGENT Call Half

FIG. 5

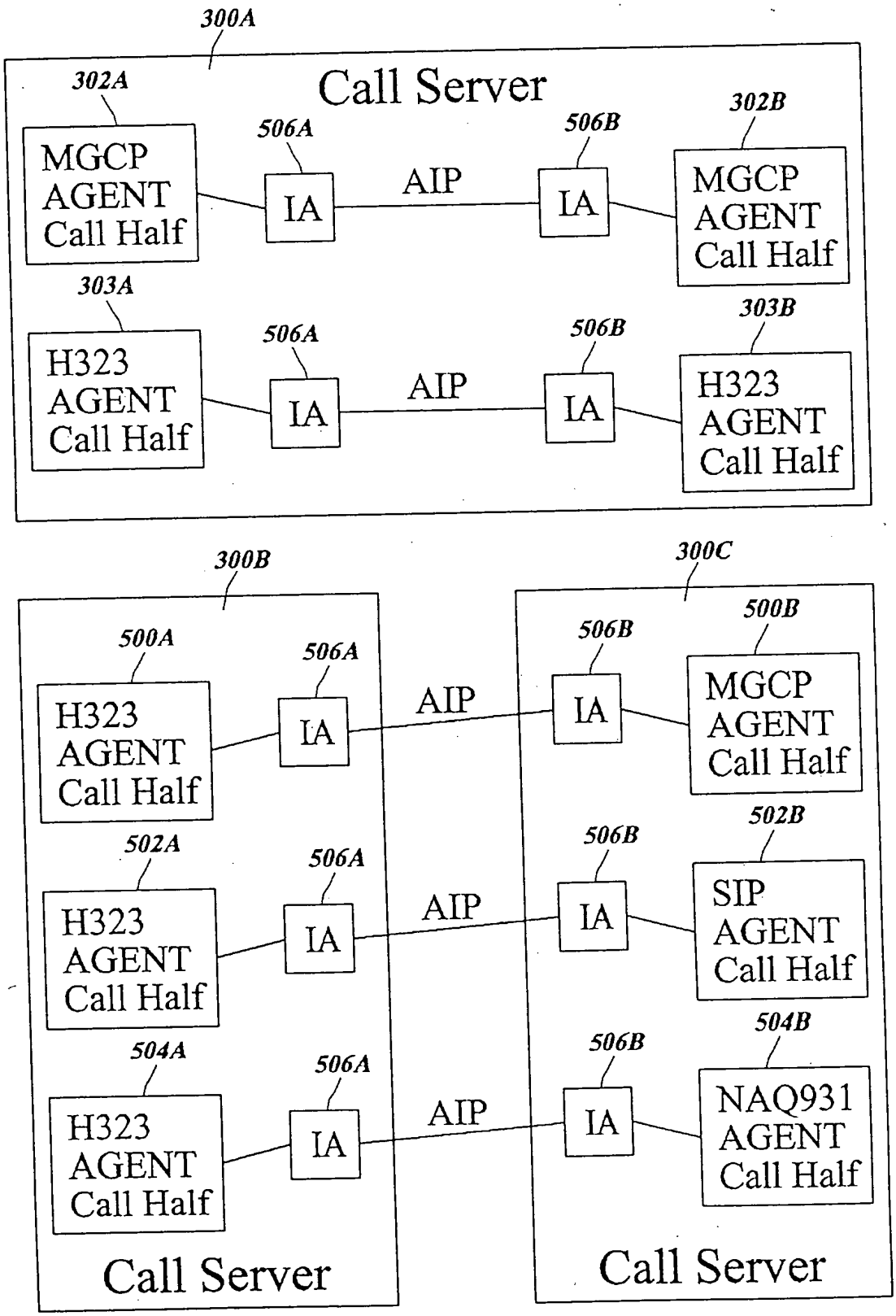

300A
Call Server
302A
MGCP AGENT Call Half
506A
IA
AIP
506B
IA
302B
MGCP AGENT Call Half
303A
H323 AGENT Call Half
506A
IA
AIP
506B
IA
303B
H323 AGENT Call Half
300B
500A
H323 AGENT Call Half
506A
IA
AIP
506B
IA
500B
MGCP AGENT Call Half
502A
H323 AGENT Call Half
506A
IA
AIP
506B
IA
502B
SIP AGENT Call Half
504A
H323 AGENT Call Half
506A
IA
AIP
506B
IA
504B
NAQ931 AGENT Call Half
Call Server
300C
Call Server

FIG. 6

08120 "Stg90s60

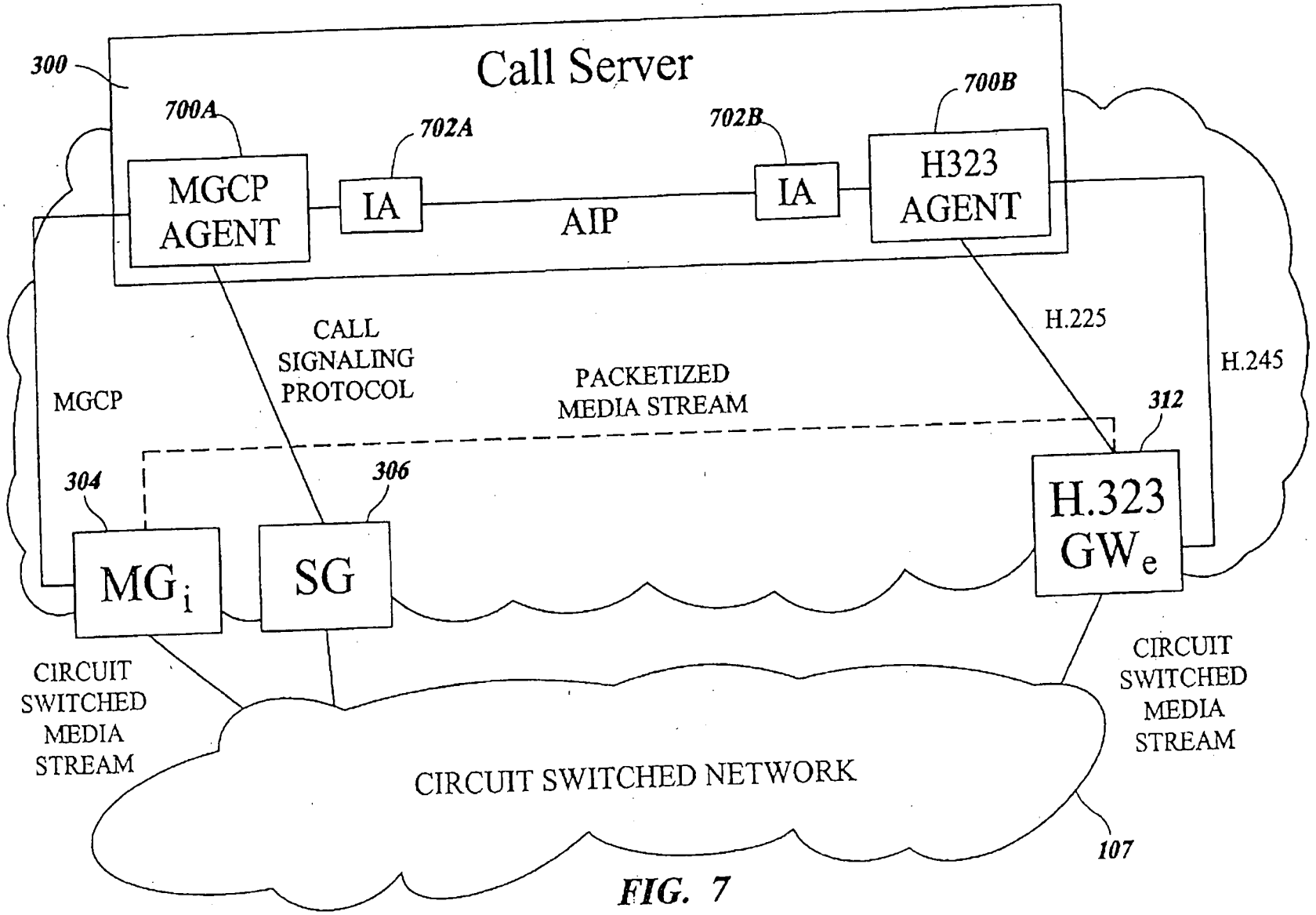


FIG. 7

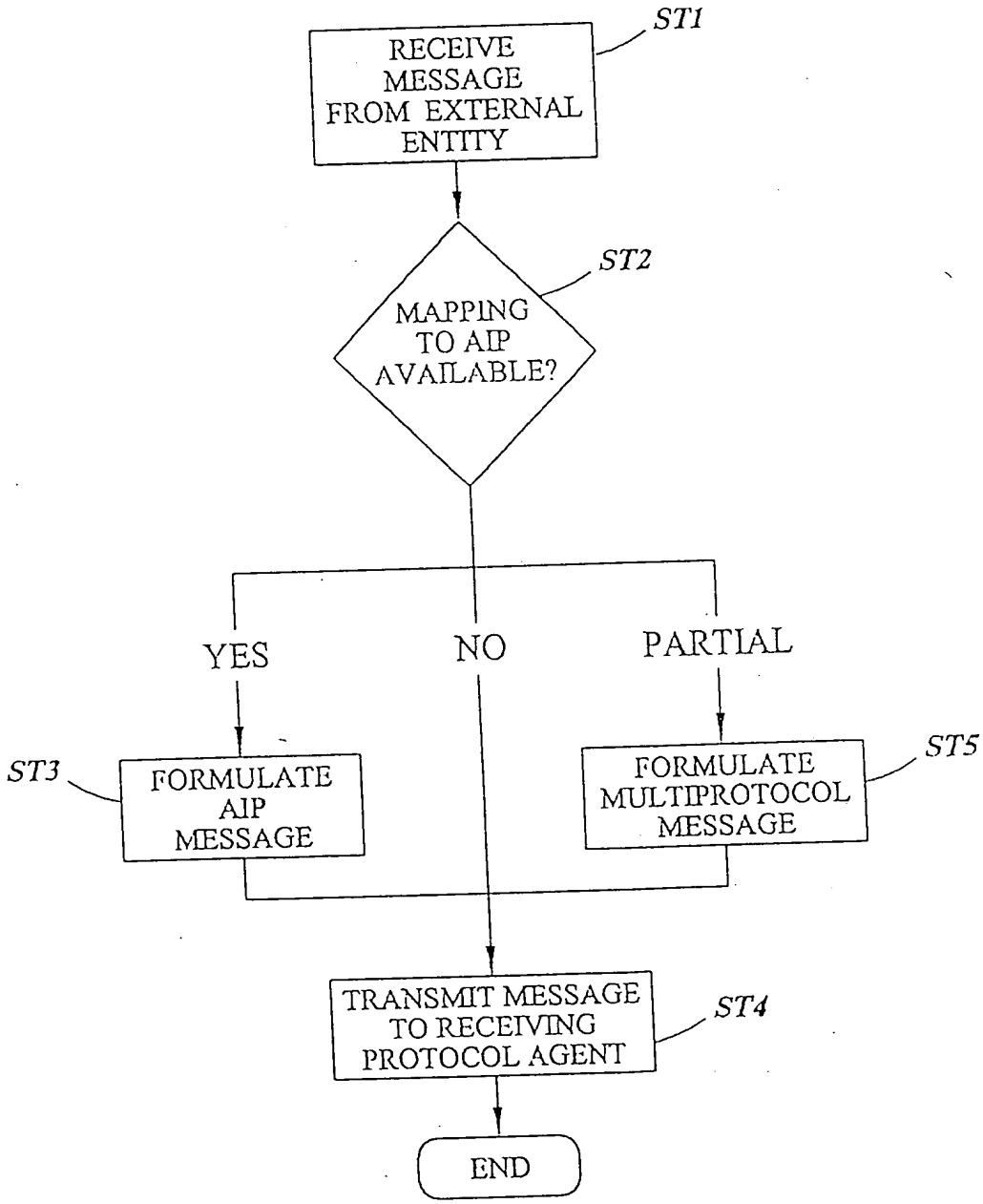
Connection Information Parameter

Field	Example Values
Media Type	Audio, Video, Data
Channel ID	12345
Channel Operation	No action, open, close, modify, mode change, redirect, direct, send capabilities
Current Media Description	G.711@2 frames/packet
Media Capabilities	G.711, G.729, RTP address, payload size, media specific information

800 802 804 806 808 810 812 814 816 818

FIG. 8

FIG. 9a


RECEIVE MESSAGE FROM EXTERNAL ENTITY
ST1
MAPPING TO AIP AVAILABLE?
ST2
YES
NO
PARTIAL
ST3
FORMULATE AIP MESSAGE
FORMULATE MULTIPROTOCOL MESSAGE
ST5
TRANSMIT MESSAGE TO RECEIVING PROTOCOL AGENT
ST4
END

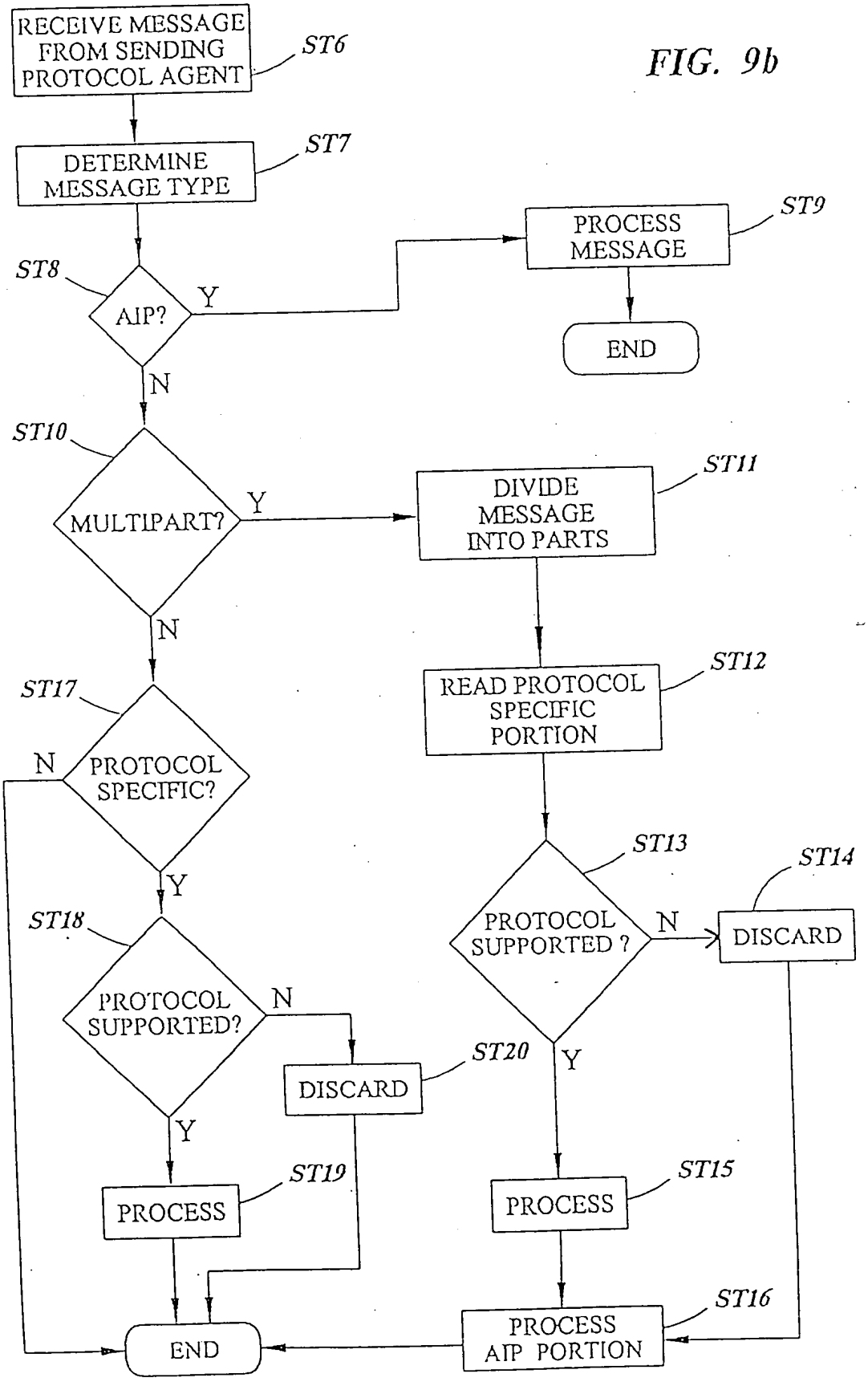

RECEIVE MESSAGE FROM SENDING PROTOCOL AGENT
ST6
DETERMINE MESSAGE TYPE
ST7
ST8
AIP?
Y
N
PROCESS MESSAGE
ST9
END
ST10
MULTIPART?
Y
N
DIVIDE MESSAGE INTO PARTS
ST11
READ PROTOCOL SPECIFIC PORTION
ST12
ST17
PROTOCOL SPECIFIC?
N
Y
ST13
PROTOCOL SUPPORTED ?
N
Y
ST14
DISCARD
ST18
PROTOCOL SUPPORTED?
N
Y
ST20
DISCARD
ST19
PROCESS
ST15
PROCESS
ST16
PROCESS AIP PORTION
END

FIG. 9b

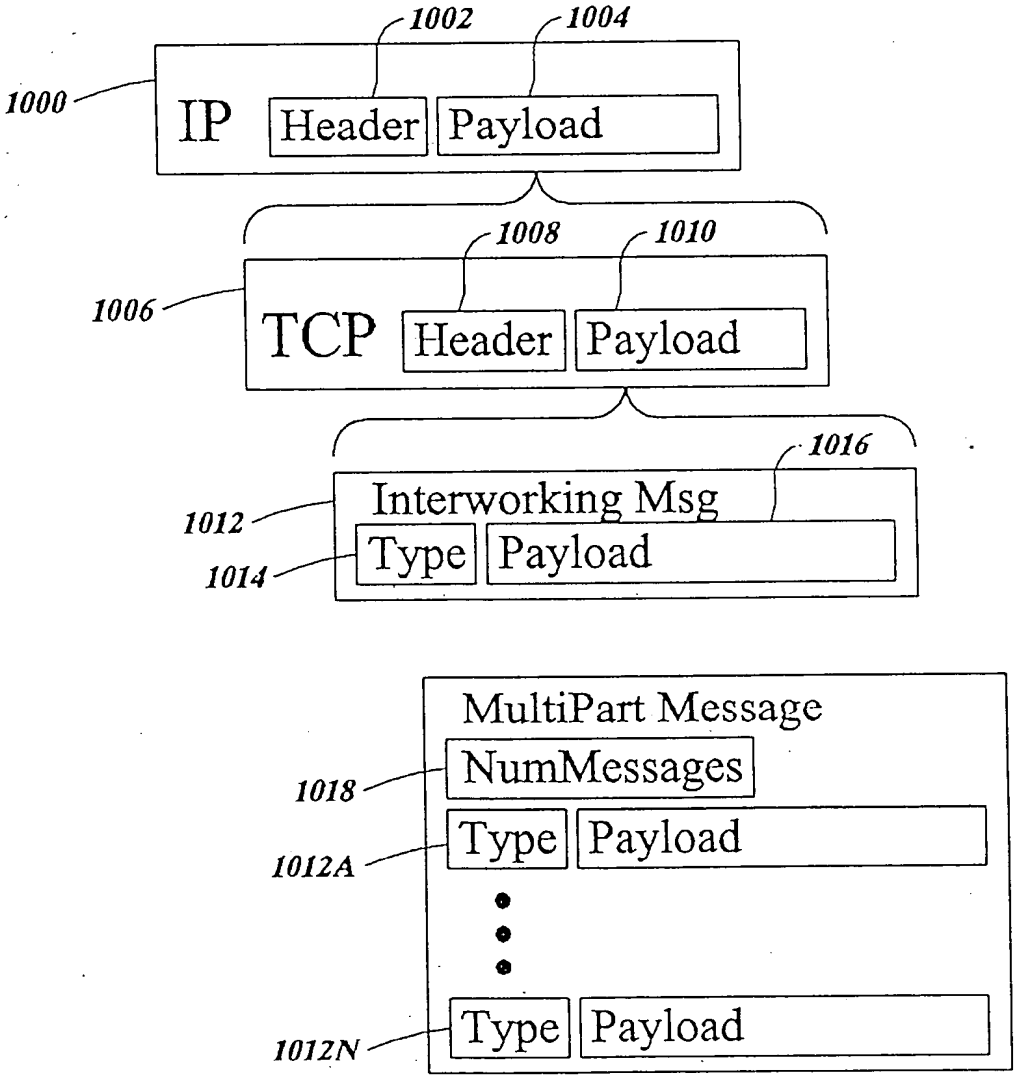

1002
1004
1000
IP
Header
Payload
1008
1010
1006
TCP
Header
Payload
1016
Interworking Msg
1012
Type
Payload
1014
MultiPart Message
NumMessages
1018
Type
Payload
1012A
Type
Payload
1012N

FIG. 10

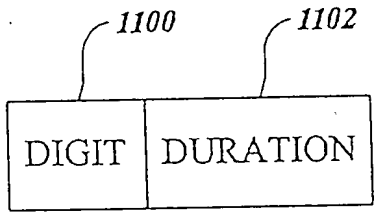


FIG. 11

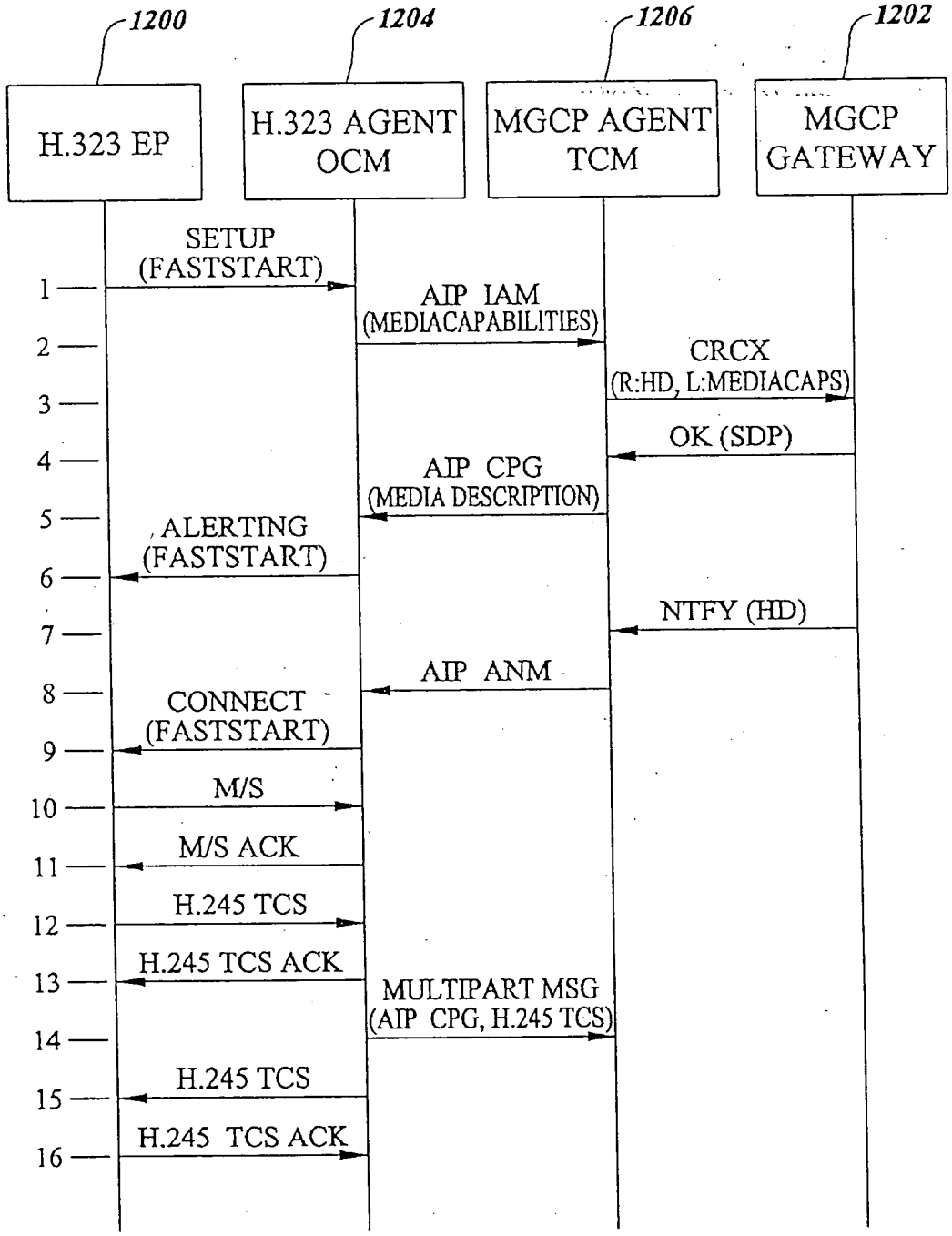

1200
1204
1206
1202
H.323 EP
H.323 AGENT OCM
MGCP AGENT TCM
MGCP GATEWAY
SETUP (FASTSTART)
AIP IAM (MEDIACAPABILITIES)
CRCX (R:HD, L:MEDIACAPS)
OK (SDP)
AIP CPG (MEDIA DESCRIPTION)
ALERTING (FASTSTART)
NTFY (HD)
AIP ANM
CONNECT (FASTSTART)
M/S
M/S ACK
H.245 TCS
H.245 TCS ACK
MULTIPART MSG (AIP CPG, H.245 TCS)
H.245 TCS
H.245 TCS ACK
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

FIG. 12

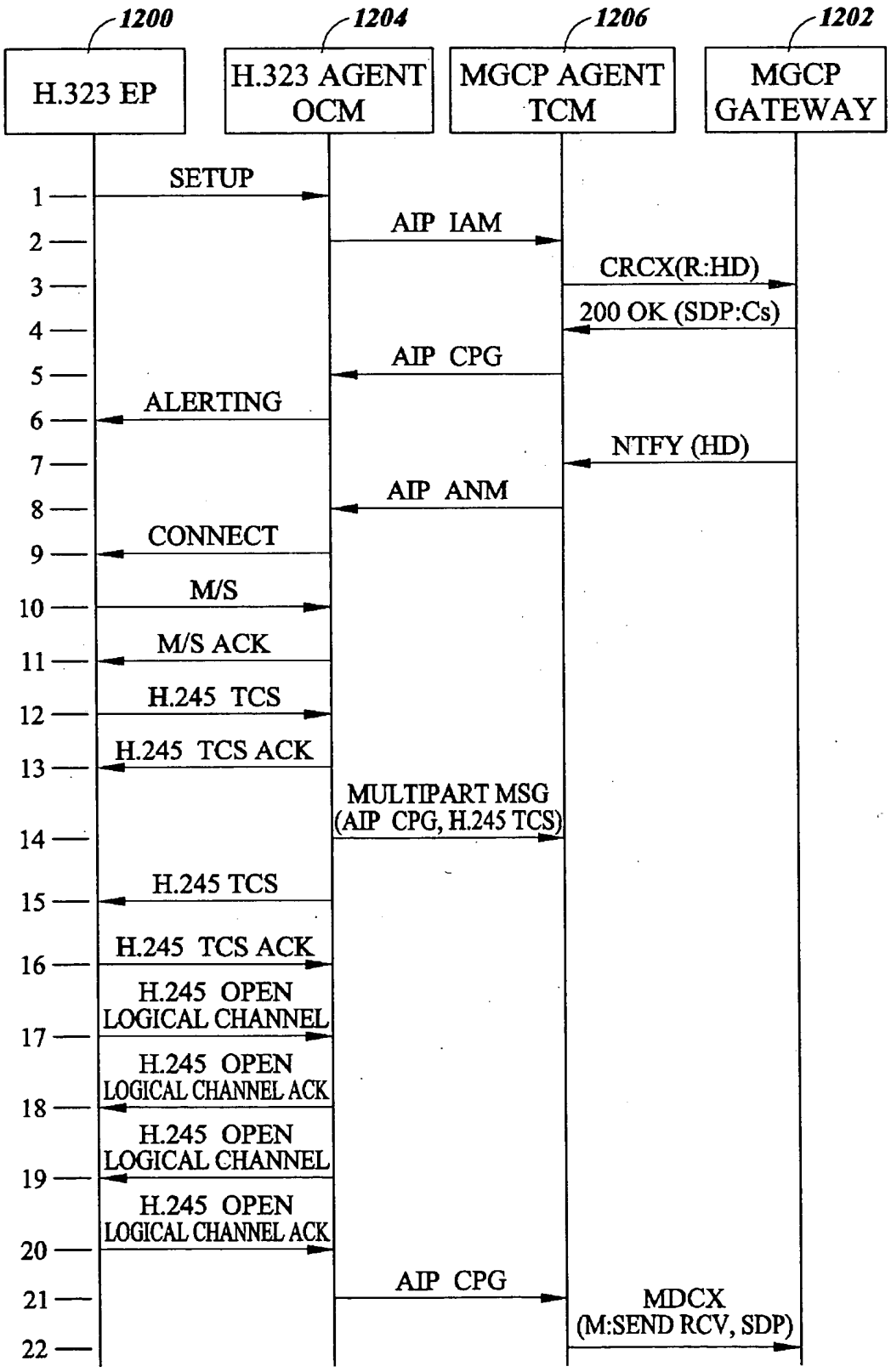

1200
1204
1206
1202
H.323 EP
H.323 AGENT OCM
MGCP AGENT TCM
MGCP GATEWAY
1 SETUP
2 AIP IAM
3 CRCX(R:HD)
4 200 OK (SDP:Cs)
5 AIP CPG
6 ALERTING
7 NTFY (HD)
8 AIP ANM
9 CONNECT
10 M/S
11 M/S ACK
12 H.245 TCS
13 H.245 TCS ACK
14 MULTIPART MSG (AIP CPG, H.245 TCS)
15 H.245 TCS
16 H.245 TCS ACK
17 H.245 OPEN LOGICAL CHANNEL
18 H.245 OPEN LOGICAL CHANNEL ACK
19 H.245 OPEN LOGICAL CHANNEL
20 H.245 OPEN LOGICAL CHANNEL ACK
21 AIP CPG
22 MDCX (M:SEND RCV, SDP)

FIG. 13

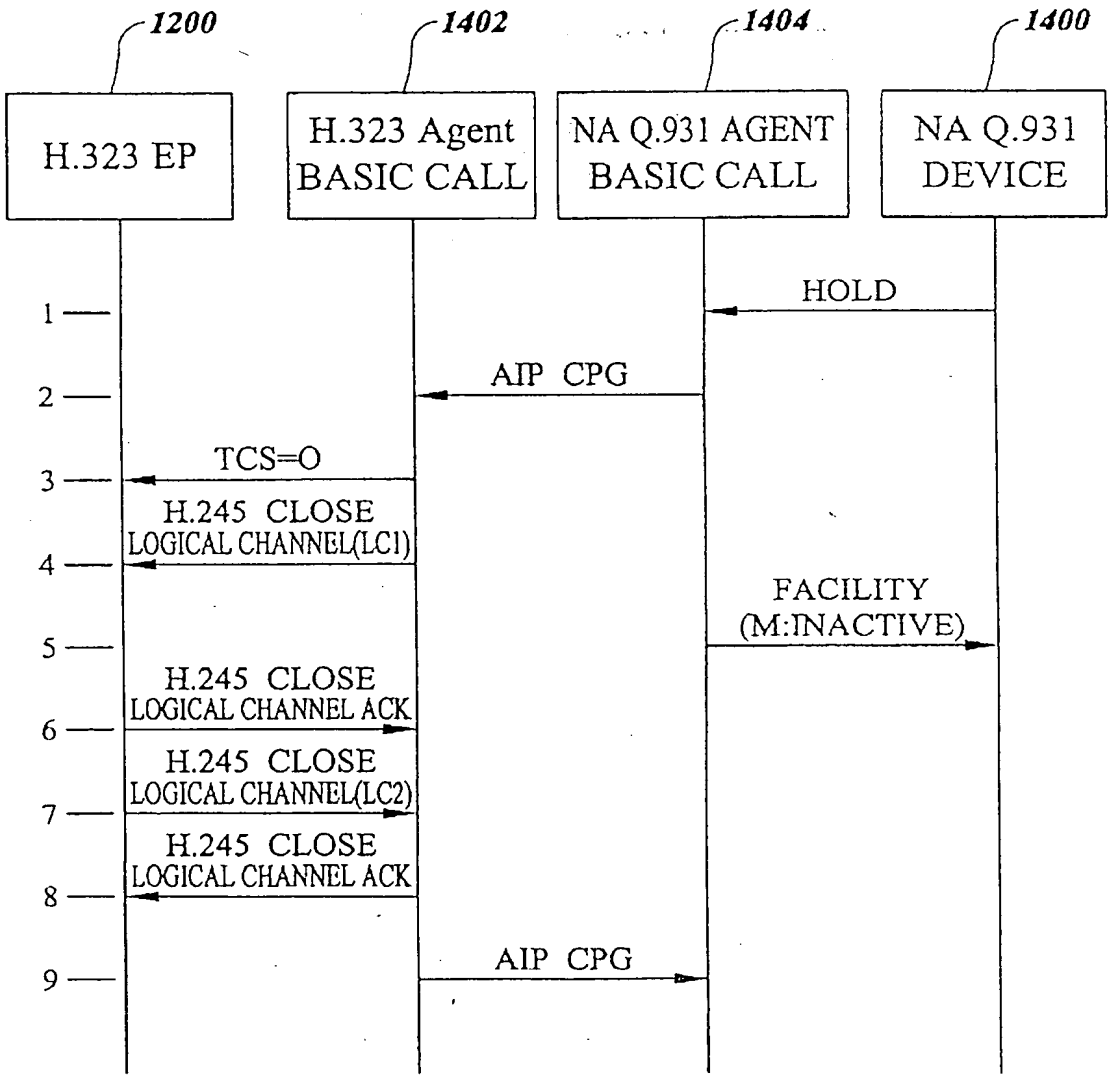

1200
1402
1404
1400
H.323 EP
H.323 Agent BASIC CALL
NA Q.931 AGENT BASIC CALL
NA Q.931 DEVICE
1
HOLD
2
AIP CPG
3
TCS=O
4
H.245 CLOSE LOGICAL CHANNEL(LC1)
5
FACILITY (M:INACTIVE)
6
H.245 CLOSE LOGICAL CHANNEL ACK
7
H.245 CLOSE LOGICAL CHANNEL(LC2)
8
H.245 CLOSE LOGICAL CHANNEL ACK
9
AIP CPG

FIG. 14

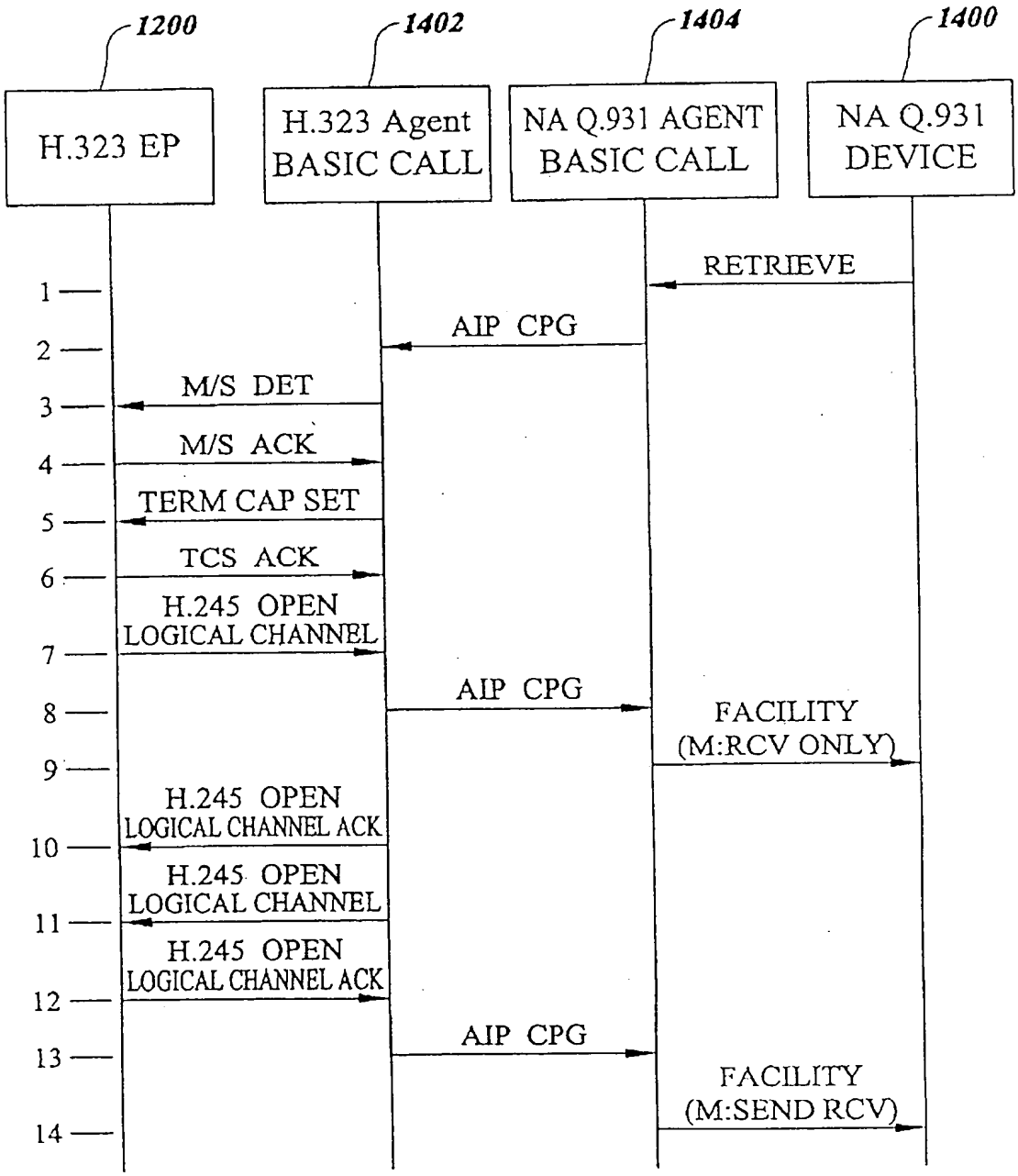

1200
1402
1404
1400
H.323 EP
H.323 Agent BASIC CALL
NA Q.931 AGENT BASIC CALL
NA Q.931 DEVICE
RETRIEVE
AIP CPG
M/S DET
M/S ACK
TERM CAP SET
TCS ACK
H.245 OPEN LOGICAL CHANNEL
AIP CPG
FACILITY (M:RCV ONLY)
H.245 OPEN LOGICAL CHANNEL ACK
H.245 OPEN LOGICAL CHANNEL
H.245 OPEN LOGICAL CHANNEL ACK
AIP CPG
FACILITY (M:SEND RCV)
1
2
3
4
5
6
7
8
9
10
11
12
13
14

FIG. 15

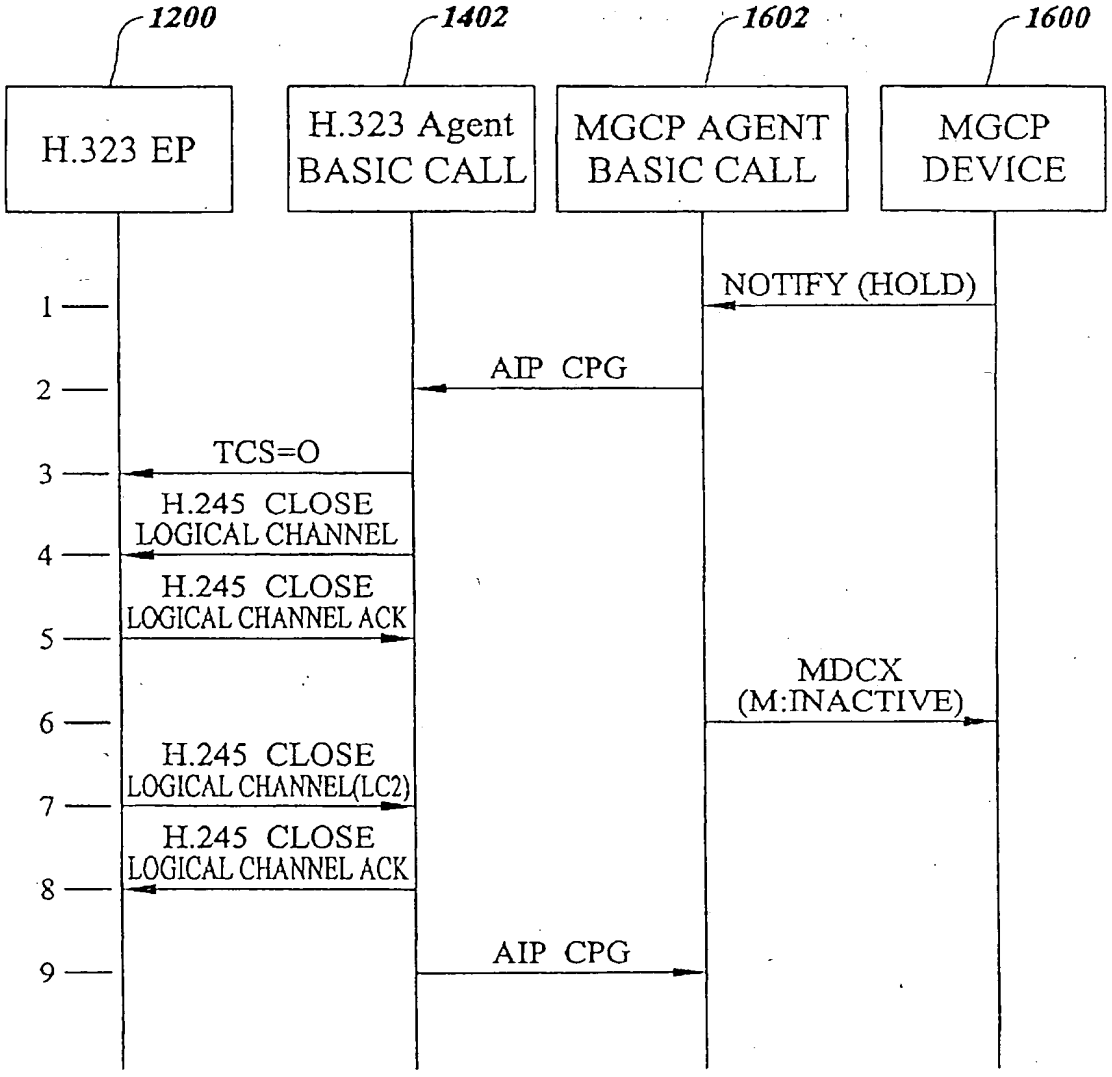

1200
1402
1602
1600
H.323 EP
H.323 Agent BASIC CALL
MGCP AGENT BASIC CALL
MGCP DEVICE
NOTIFY (HOLD)
1
AIP CPG
2
TCS=O
3
H.245 CLOSE LOGICAL CHANNEL
4
H.245 CLOSE LOGICAL CHANNEL ACK
5
MDCX (M:INACTIVE)
6
H.245 CLOSE LOGICAL CHANNEL(LC2)
7
H.245 CLOSE LOGICAL CHANNEL ACK
8
AIP CPG
9

FIG. 16

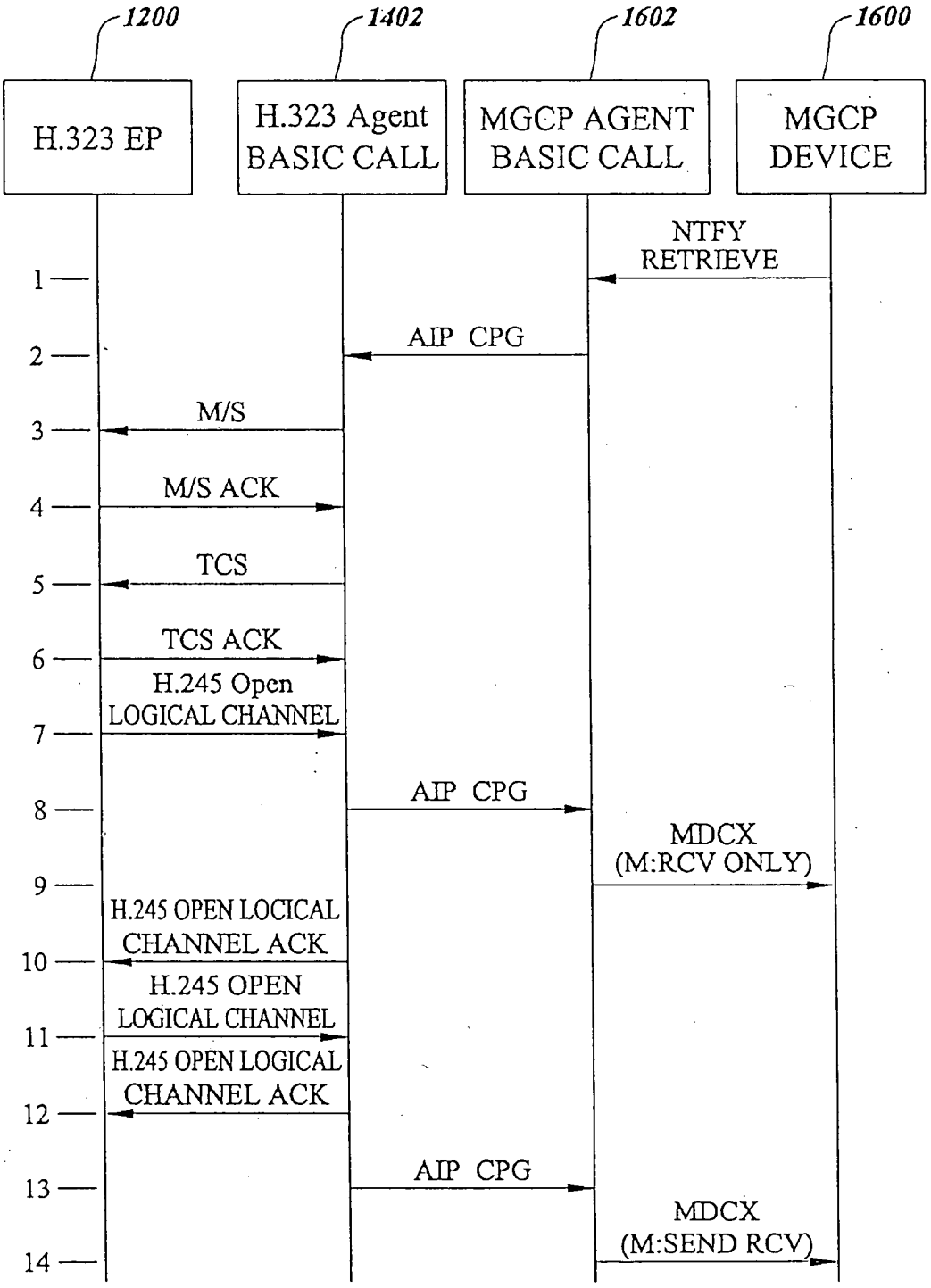

1200
1402
1602
1600
H.323 EP
H.323 Agent BASIC CALL
MGCP AGENT BASIC CALL
MGCP DEVICE
NTFY RETRIEVE
1
AIP CPG
2
M/S
3
M/S ACK
4
TCS
5
TCS ACK
6
H.245 Open LOGICAL CHANNEL
7
AIP CPG
8
MDCX (M:RCV ONLY)
9
H.245 OPEN LOCICAL CHANNEL ACK
10
H.245 OPEN LOGICAL CHANNEL
11
H.245 OPEN LOGICAL CHANNEL ACK
12
AIP CPG
13
MDCX (M:SEND RCV)
14

FIG. 17

08620 "5A6960

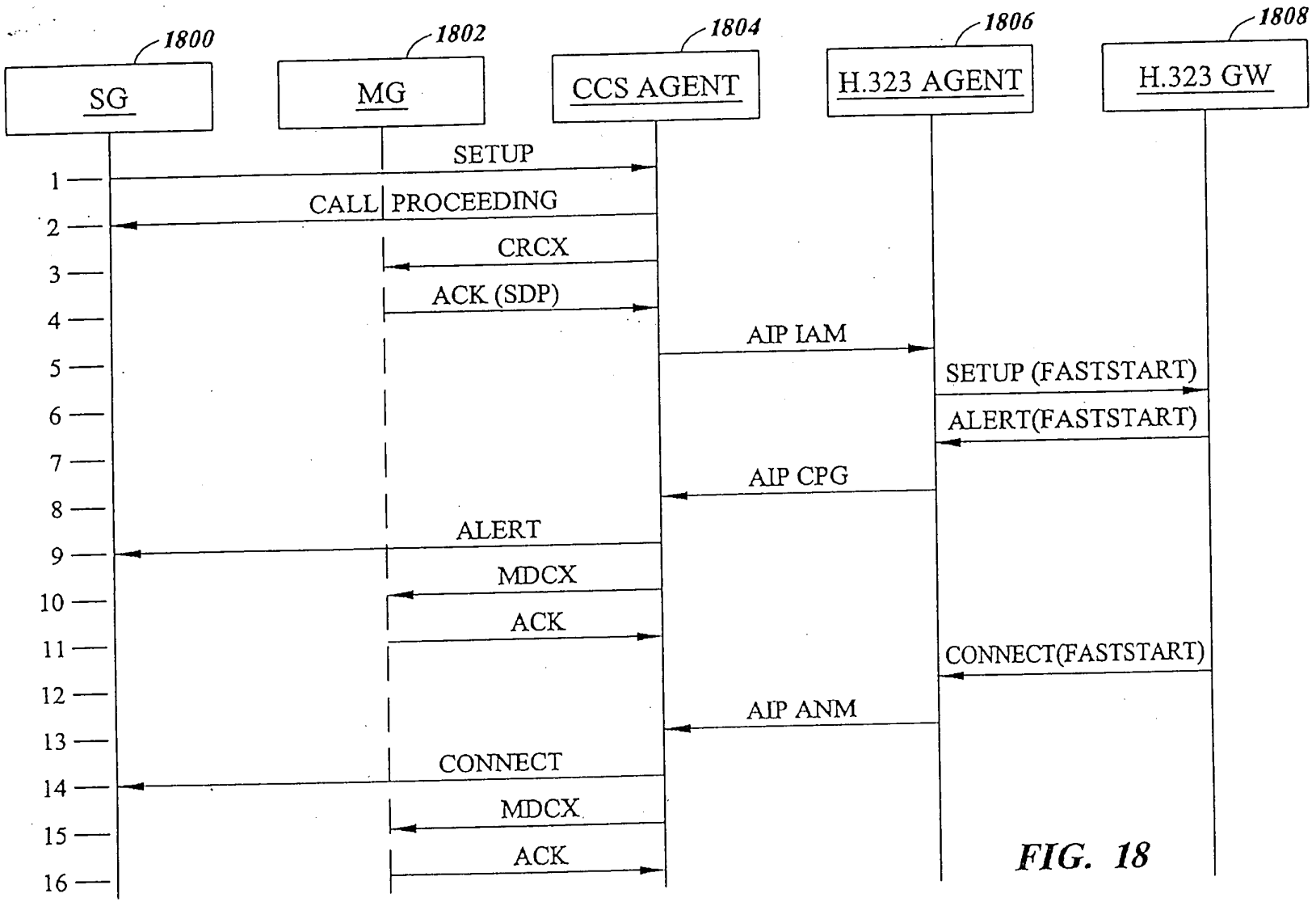


FIG. 18

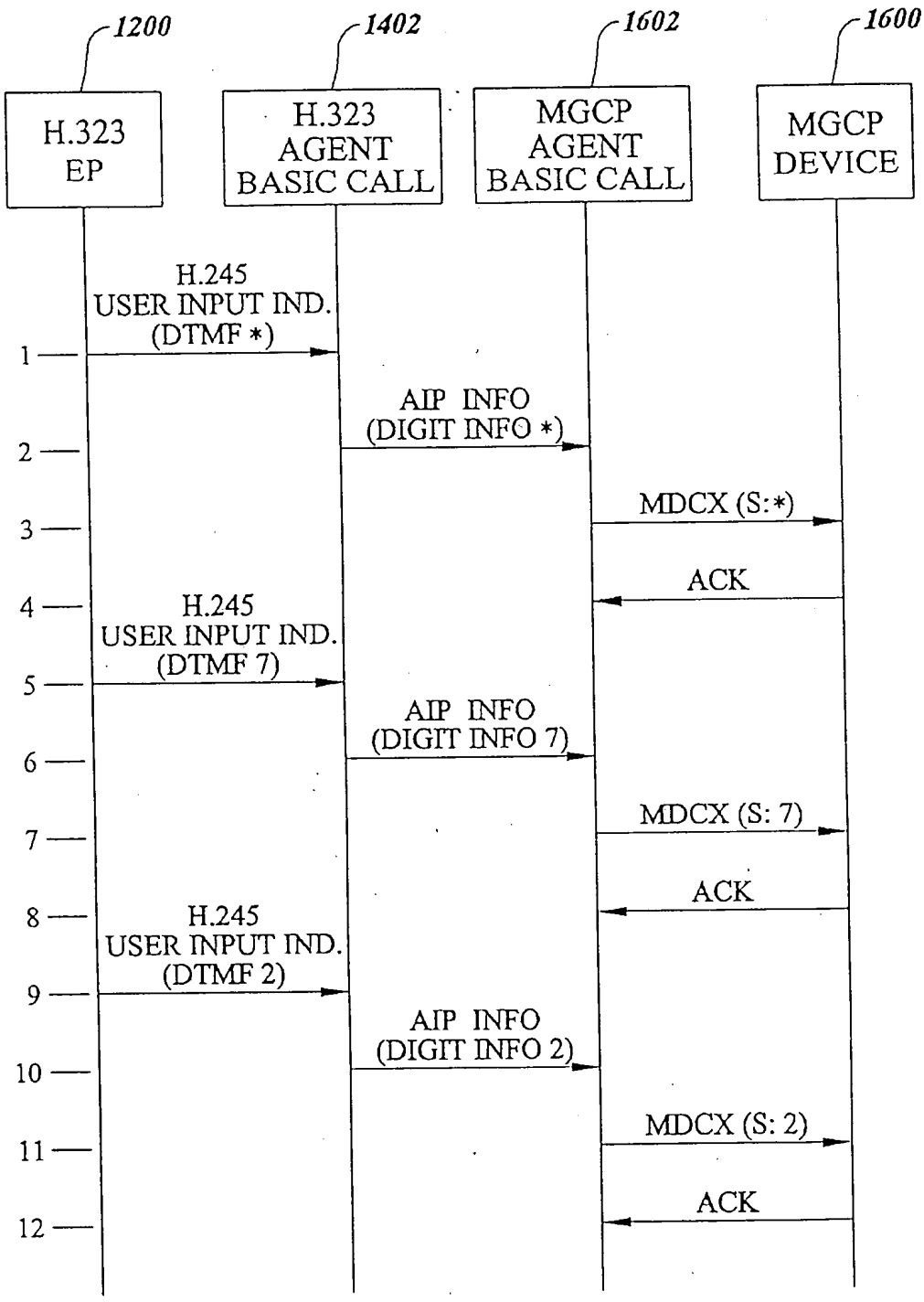

1200
1402
1602
1600
H.323 EP
H.323 AGENT BASIC CALL
MGCP AGENT BASIC CALL
MGCP DEVICE
H.245 USER INPUT IND. (DTMF *)
1
AIP INFO (DIGIT INFO *)
2
MDCX (S:*)
3
ACK
4
H.245 USER INPUT IND. (DTMF 7)
5
AIP INFO (DIGIT INFO 7)
6
MDCX (S: 7)
7
ACK
8
H.245 USER INPUT IND. (DTMF 2)
9
AIP INFO (DIGIT INFO 2)
10
MDCX (S: 2)
11
ACK
12

FIG. 19